

RHYZOBIOUS CHRYSOMELOIDES (HERBST) (COLEOPTERA:
COCCINELLIDAE) NEW TO BRITAIN

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Abstract. The small European coccinellid beetle *Rhyzobius chrysomeloides* (Herbst), not previously known in Britain, has been found in Surrey (VC 17) at two localities. Comparison is made with the common British species *Rhyzobius litura* (Fab.).

INTRODUCTION

The banks of motorways are often considered to be the equivalent of a nature reserve but few people have either the opportunity or the inclination to examine their flora and fauna since they are subject to extremes of noise and pollution, while unauthorised access is officially discouraged. An exception to this occurs near the village of Nutfield in east Surrey where the M23 motorway bursts through the Greensand ridge in a deep cutting and crosses the valley to the north on an embankment before ascending the chalk hills of the North Downs. There is a solid fence at the top of this embankment, probably to contain the noise of traffic, so access to the slopes is possible.

About one kilometre to the north-east of Nutfield, at grid reference TQ312516, a track passes under the motorway to connect Lake Farm on the east side with some cottages and fields to the west. This track is also a public footpath and on 26.iv.1996 I came along this path while routinely recording ladybirds (Coccinellidae) and other insects for a series of local atlases. A group of young pine trees (*Pinus sylvestris* L.) had been planted on the west bank of the motorway and were then about four metres high. From one of these pines I beat a small orange-brown coccinellid which I assumed to be *Scymnus suturalis* Thunberg, a species found commonly on pine. As is advisable with these tiny beetles, I took the specimen home for checking but, on mounting it, I realised that it was a larger insect than the *Scymnus*, with longer antennae, and was clearly a specimen of *Rhyzobius*.

About a year later I tried to name the specimen using the key by Fürsch (1967) to the Coccinellidae of central Europe. It appeared to be *Rhyzobius chrysomeloides* (Herbst), a widespread species on the European mainland that had not previously been recorded from the British Isles. The external differences between this species and our common *R. litura* (Fab.) are slight and it is advisable to check the male genitalia. At that time I had no experience of dissecting such a tiny beetle and a tentative probe produced only a minute piece of gut which caused me to think it was a female. The specimen was then taken to Dr R. G. Booth who pronounced that it was in fact a male, dissected it immediately and confirmed that it was indeed *R. chrysomeloides*.

COMPARISON WITH *RHYZOBIOUS LITURA*

The differences between these two species are illustrated by Fürsch (1967). The sides of the pronotum of *litura* taper from the base, and increasingly towards the front, while the pronotal edges of *chrysomeloides* are almost parallel-sided over the basal quarter (Fig. 1). The prosternal carinae (between the fore coxae) of *litura* taper gradually from rear to front, while in *chrysomeloides* the tapering is interrupted by a parallel-sided central section and the apex is broader (Fig. 2).

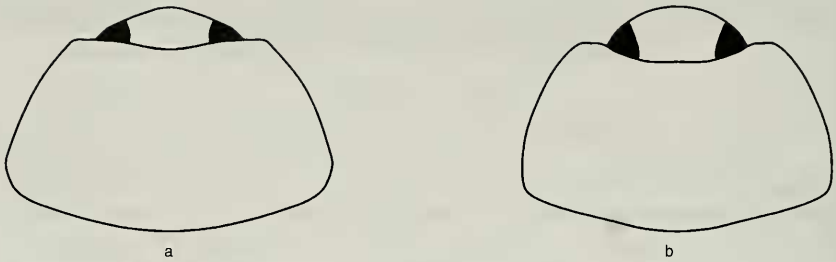


Fig. 1. Outline of pronotum. a. *R. litura*. b. *R. chrysomeloides*.

However, there is often some individual variation in this character, so it may not always be as clear-cut as the illustrations suggest. The colour of *litura* is usually pale orange-brown, often with a U-shaped dark mark, although darker individuals can also occur. The background colour of *chrysomeloides* is somewhat darker and the dark marks are more strongly developed, sometimes with additional spots inside the U-shaped mark. Fürsch states that *litura* is shortly oval and somewhat arched, while *chrysomeloides* is more elongate and flatter.

The above differences are comparative and slight but the male genitalia are quite distinct (Fig. 3). In *chrysomeloides*, the median lobe is more slender, elongate and parallel-sided, and is distinctly longer than the pair of parameres, while in *litura*, the median lobe is much shorter and stouter, and not longer than the parameres. The median lobe of *litura* also has a strong protruberant prong on its dorsal face, between the parameres, which is lacking in *chrysomeloides*. This prong is clearly visible when the genital capsule is viewed from the side. Fürsch also illustrates differences in the genital plates of the females, in that the coxites are more slender and elongate in *chrysomeloides* than they are in *litura*.

COMMENT

The presence of the first British specimen of *R. chrysomeloides* on a motorway bank brings to mind the delightful possibility that it might, quite literally, have fallen off the back of a lorry. At present about one million lorries and over five million

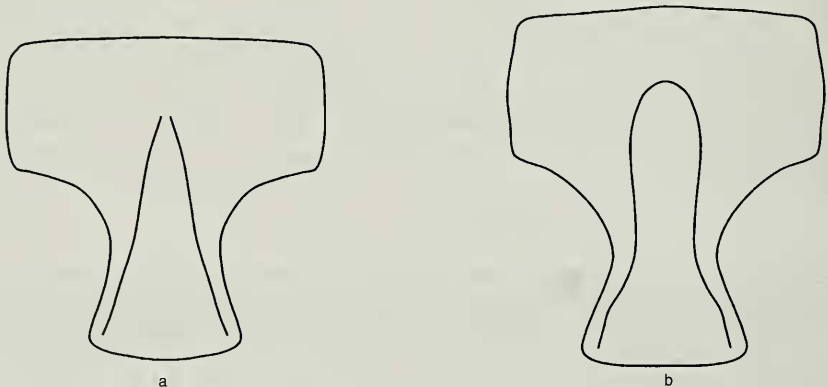


Fig. 2. Prosternal carinae. a. *R. litura*. b. *R. chrysomeloides*. (after Bielawski, 1959)

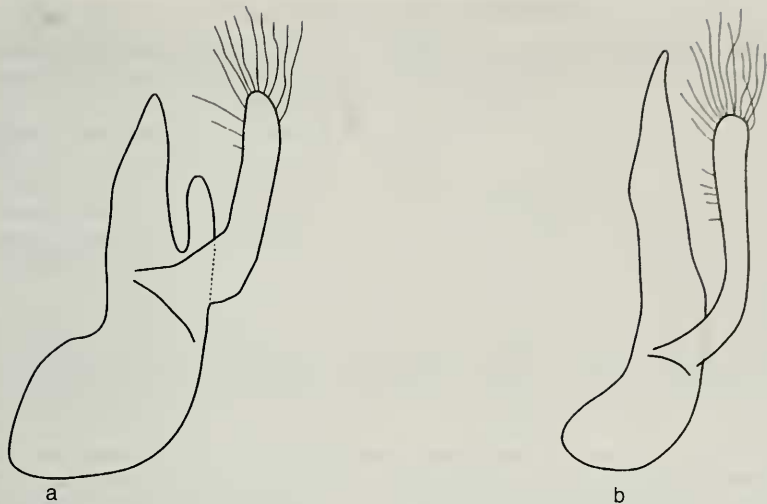


Fig. 3. Male genitalia (part). a. *R. litura*. b. *R. chrysomeloides*. (after Bielawski, 1959)

private cars travel from mainland Europe to Britain each year (source: Eurotunnel annual report, 1998). The chance of importing individual insects is clearly high but it is nevertheless doubtful whether enough specimens could come in to found a breeding colony. A more probable means of importation would be with young trees imported from Continental nurseries.

The chance of this specimen being a primary immigrant is low—for an example to be discovered by casual beating it is more likely that colonies already exist. I have not been able to return to the site of the discovery with sufficient spare time to make a further search, but during the last three years I have dissected over 300 specimens of *Rhyzobius* swept from its usual grassland habitat and confirmed that all the males were *litura*. Meanwhile it is recommended that all specimens of *Rhyzobius* are examined carefully, particularly if they have more extensive dark marks than usual, or are beaten from trees or bushes, since Fürsch (1967) noted that *chrysomeloides* was found especially on pine trees and bushes, often near water. Indeed, as this note was being prepared, a thriving colony of *R. chrysomeloides* was subsequently discovered in West Molesey, Surrey (Menzies, 1999 and pers. comm.).

ACKNOWLEDGEMENTS

Thanks are due to Graham Collins for tidying up my lop-sided drawings. I am also grateful to Roger Booth (CABI Bioscience) for convincing me that the specimen was a male and for performing the rather intricate dissection needed to confirm its identity. The specimen has been presented to the Natural History Museum.

REFERENCES

- Bielawski, R. 1959. Klucze do oznaczania owadów Polski. Zeszyt 76. Coccinellidae. Warsaw.
 Fürsch, H. 1967. Family Coccinellidae. In: Freude-Harde-Lohse, *Die Käfer Mitteleuropas*, vol. 7, pp. 227–278. Goecke & Evers, Krefeld.
 Menzies, I. S. 1999. [Exhibit at 1998 BENHS annual exhibition.] *British Journal of Entomology and Natural History* 12: 176.

SHORT COMMUNICATION

Hoverfly (Syrphidae) records from North Uist and the Monach Islands, Scotland—July 1999—North Uist (57°35' N, 7°15' W), surface area of 341 km², and the five Monach Islands (57°30' N, 7°40' W), total area of 3.5 km², are flat and largely treeless islands that lie in the Atlantic Ocean off the west coast of Scotland. Together with the other Outer Hebrides, these islands are relatively 'unexplored' for hoverflies (Whiteley, 1994; Stubbs & Falk, 1993). During a week of uncharacteristically hot and dry weather in North Uist (24–30.vii.1999) and a visit to Ceann Ear, the largest of the Monach Islands, on 31.vii.1999, we observed the following sixteen hoverfly species on North Uist, one of which, *Platycheirus manicatus*, occurred also on the Monach Islands.

The low hoverfly abundance and diversity we observed probably reflects the relatively small size and geographical location of the islands, and the region's usual wet and windy weather conditions. However, collecting was not exhaustive or systematic, and concentrated largely on the northern half of North Uist. The greatest abundance of species was observed in the sand dunes and flower-rich machair at Solas, Newton, Balranald and Clachan Shanda. In the last of these locations, two male corncrakes (*Crex crex* (L.)) were calling. Unless otherwise stated, all the species listed below were seen in these habitat types. In addition, on passing through Skye to reach North Uist, we found *Eristalis pertinax* (Scop.) on a roadside verge at Broadford.

Melanostoma mellinum (L.) and *Melanostoma scalare* (Fab.): both *Melanostoma* species were found only in *Eriophorum vaginatum*-rich moorland near Weaver's Point, Lochmaddy. *Platycheirus albimanus* (Fab.): machair on North Uist and present also on a roadside verge at Broadford, Skye. *Platycheirus clypeatus* (Meigen); *Platycheirus manicatus* (Meigen): common on North Uist and the only species observed from Ceann Ear (Monach Islands), where it was widespread in the machair. *Metasyrphus corollae* (Fab.); *Sphaerophoria* sp.?: females only found within *Eriophorum vaginatum*-rich moorland near Weaver's Point, Lochmaddy. *Syrphus vitripennis* Meigen; *Cheilosia illustrata* (Harris); *Cheilosia latrifrons* (Zett.); *Rhingia campestris* Meigen; *Lejogaster metallina* (Fab.); *Eristalis abusivus* Collin; *Eristalis intricarius* (L.); *Helophilus pendulus* (L.); *Sericonomyia silentis* (Harris): in *Eriophorum vaginatum*-rich moorland near Weaver's Point, Lochmaddy and boggy moorland at Newton, as well as hill-topping on Ben Mor c. 190 m above sea level. However, the *S. silentis* specimens collected in North Uist had white-yellow abdominal bars (tergites 2–4) which were more similar to those of *Sericonomyia lappoua* (L.) as illustrated in Stubbs & Falk (1993, p. 107; plate 8), and *S. lappoua* specimens in the collection of the Natural History Museum, London. The scutellum in *S. silentis* (North Uist specimens) is almost black, while in *S. lappoua* (museum specimens) it is reddish. This may be a more reliable aid to identification than the colour of the tergite bars.

We thank Edward Wake, Katherine Wake and Susie Gibbs for their assistance with this study; Niall Johnson (The Uist Outdoor Centre) for taking us to the Monach Islands in *Sea Fury*, and Nigel Wyatt (The Natural History Museum, London) for confirming our hoverfly species determination.—ANGUS MCCULLOCH, 57 Endell Street, London WC2H 9AJ & ANDREW WAKEHAM-DAWSON, DETR, Floor 3/H11, Ashdown House, 123 Victoria Street, London SW1E 6DE

REFERENCES

- Stubbs, A. E. & Falk, S. J. 1993. *British Hoverflies*. British Entomological and Natural History Society.
- Whiteley, D. (Ed.) 1994. A Special Collection of Papers on the Outer Hebrides and Rum. *Dipterist's Digest*, 14.